CLAIMS

WHAT IS CLAIMED IS:

1. A method of providing communication among a client system, server system and an electronic communication network, the client system including a Central Processor Unit (CPU), volatile working memory associated with the CPU, a communications interface and the client system running client software for managing the communications between the client system and the electronic communications network, the server system running server software for managing communications between a plurality of client systems and the electronic communications network, the method comprising:

providing a set of billing options, the billing options including at least one technique for making a monetary payment;

specifying a billing preferences and transmitting the billing preference to the server system from the client system;

transmitting a billing approve/reject signal from the server system to the client system;

conducting two-way communications between the electronic communications network and the client system via the server system if an approve signal is provided in the transmitting a billing approve/reject signal step.

2. A method as set out in claim 1 further comprising the step of assigning an IP address to the client system, prior to the step of providing a set of billing options.

3. A method as set out in claim 1 further comprising the following steps prior to the step of providing a set of billing options:

determining if the client software on the client system is missing any components necessary for communications with the electronic communications network;

providing to the client system from the server system missing components of the client software on the client system; and

installing missing components of the client software on the client system.

4. A method as set out in claim 1 further comprising the following steps prior to the step of providing a set of billing options:

determining if the client software on the client system is missing any components necessary for communications with the electronic communications network;

searching the client system for install files containing the any said missing components; and

installing any missing components of the client software found in the searching step.

5. A method as set out in claim 1 further comprising the following steps prior to the step of providing a set of billing options:

determining if the client software on the client system is missing any components necessary for communications with the electronic communications network;

searching the client system for install files containing the any said missing components;

providing to the client system from the server system any additional missing components that are not found in the searching step; and

installing any missing components of the client software found in the searching step.

6. A method as set out in claim 1 further comprising the following steps prior to the step of providing a set of billing options:

determining if the client software on the client system is has any outdated components;

providing to the client system from the server system a current version corresponding to each of said outdated components found in said determining step; and

installing said current version corresponding to each of said outdated components found in said determining step.

7. A method as set out in claim 1 further comprising the following steps prior to the step of providing a set of billing options:

determining if the client system has proper network configuration and registry settings to accomplish communication with the electronic communications network;

if proper settings are found in said determining step, storing said settings in volatile working memory;

requesting assignment of an IP address from the server system by the client system; and

receiving said IP address in the client system from the server system.

8. A method as set out in claim 7 further comprising the following steps before the step of providing a set of billing options and after the step of receiving said IP address:

sending a request from the client system to the server system for a set of available billing options.

9. A method as set out in claim 3 further comprising the following steps prior to the step of providing a set of billing options:

determining if the client system has proper network configuration and registry settings to accomplish communication with the electronic communications network;

if proper settings are found in said determining step, storing said settings in volatile working memory;

requesting assignment of an IP address from the server system by the client system; and

receiving said IP address in the client system from the server system.

10. A method as set out in claim 1 wherein a plurality of client systems are in communication with the server system, further comprising the steps of:

maintaining a database in the server system tracking identifying information for each of said client systems in communication with said server system;

for each said client system, recording in said database said billing information for

each respective client system and data representing the amount of monetary charges accumulated by each of said respective client systems.

11. A method as set out in claim 10 wherein said data representing the amount of monetary charges includes data representing connect time.

12. A method as set out in claim 10 further comprising the steps of:

recording data representing the total amount of monetary charges for each respective client system following disconnection of client system;

transmitting said total amount of monetary charges to a network management system; and

processing account billing corresponding to the total amount of monetary charges in the network management system.

13. A method as set out in claim 1 further comprising the steps of:

periodically sending a periodic connect signal from the client system to the server system confirming that the client system is still connected;

providing a clock signal in the server system;

determining in said server system if said periodic connect signal is received from said client system within a predetermined period based on said clock signal;

setting a disconnect parameter within said server system if in the determining step it is determined that said periodic connect signal has not been received from said client system within the predetermined period.

14. A method of providing communication among a client system, server system and an electronic communication network, the client system including a Central Processor Unit (CPU), volatile working memory associated with the CPU, a communications interface and the client system running client software for managing the communications between the client system and the electronic communications network, the server system running server software for managing communications between a plurality of client systems and the electronic communications network, the method comprising:

providing a set of billing options, the billing options including at least one technique for making a monetary payment;

specifying a billing preferences and transmitting the billing preference to the server system from the client system;

sending an approval inquiry from the server system to a remote approval system;

sending a temporary approval signal from the server system to the client system before an approval signal is received by the server system from the remote approval system; and

conducting two-way communications between the electronic communications network and the client system.

15. A method as set out in claim 14 further comprising the steps of:

receiving a rejection signal in the server system from the remote approval system;

transmitting a rejection signal from the server system to the client system; and

discontinuing two-way communications between the electronic communications network and the client system.

16. A method as set out in claim 14 further comprising the steps of:

sending a rejection signal from the server system to the client system; and

transmitting additional billing information from the client system to the server system.

17. A communication system providing communication among a client system, server system and an electronic communication network, the client system running client software for managing the communications between the client system and the electronic communications network, the server system running server software for managing communications between a plurality of client systems and the electronic communications network, the communications means comprising:

means for providing a set of billing options, the billing options including at least one technique for making a monetary payment;

means for specifying a billing preferences and transmitting the billing preference to the server system from the client system;

means for transmitting a billing approve/reject signal from the server system to the client system;

means for conducting two-way communications between the electronic communications network and the client system via the server system if an approve signal received in the client system.

18. A communications system as set out in claim 17 further comprising the means for assigning an IP address to the client system.

19. A communications system as set out in claim 17 further comprising:

means for determining if the client software on the client system is missing any components necessary for communications with the electronic communications network;

means for providing to the client system from the server system missing components of the client software on the client system; and

means for installing missing components of the client software on the client system.

20. A communications system as set out in claim 17 further comprising:

means for determining if the client software on the client system is missing any components necessary for communications with the electronic communications network;

means for searching the client system for install files containing the any said missing

components; and

means for installing any missing components of the client software.

21. A communications system as set out in claim 17 further comprising:

means for determining if the client software on the client system is missing any components necessary for communications with the electronic communications network;

means for searching the client system for install files containing the any said missing components;

means for providing to the client system from the server system additional missing components; and

means for installing any missing components of the client software provided to the client system by the means for providing.

22. A communications system as set out in claim 17 further comprising: :

means for determining if the client software on the client system is has any outdated components;

means for providing to the client system from the server system a current version outdated components; and

means for installing said current version corresponding to each of said outdated components.

23. A communications system as set out in claim 17 further comprising:

means for determining if the client system has proper network configuration and registry settings to accomplish communication with the electronic communications network;

means for storing said settings in volatile working memory;

means for requesting assignment of an IP address from the server system by the client system; and

means for receiving said IP address in the client system from the server system.

24. A communications system as set out in claim 23 further comprising:

means for sending a request from the client system to the server system for a set of available billing options.

25. A method as set out in claim 19 further comprising:

means for determining if the client system has proper network configuration and registry settings to accomplish communication with the electronic communications network;

means for storing said settings in volatile working memory;

means for requesting assignment of an IP address from the server system by the client system; and

means for receiving said IP address in the client system from the server system.

26. A method as set out in claim 17 wherein a plurality of client systems are in communication with the server system, further comprising:

means for maintaining a database in the server system tracking identifying information for each of said client systems in communication with said server system;

means for recording in said database for each said client system, said billing information for each respective client system and data representing the amount of monetary charges accumulated by each of said respective client systems.

27. A communications system as set out in claim 26 wherein said data representing the amount of monetary charges includes data representing connect time.

28. A communications system as set out in claim 26 further comprising:

means for recording data representing the total amount of monetary charges for each respective client system following disconnection of client system;

means for transmitting said total amount of monetary charges to a network management system; and

means for processing account billing corresponding to the total amount of monetary charges in the network management system.

29. A communications system as set out in claim 17 further comprising:

means for periodically sending a periodic connect signal from the client system to the server system confirming that the client system is still connected;

means for providing a clock signal in the server system;

means for determining in said server system if said periodic connect signal is received from said client system within a predetermined period based on said clock signal;

means for setting a disconnect parameter within said server system if said determining means determines that said periodic connect signal has not been received from said client system within the predetermined period.

30. A data storage medium including machine readable code thereon for use in a client computer system having a Central Processor Unit (CPU), volatile working memory associated with the CPU, a communications interface, and means for reading code from the storage medium, the storage medium comprising:

means for receiving a set of billing options, the billing options including at least one technique for making a monetary payment;

means for specifying a billing preferences and transmitting the billing preference to the server system from the client system;

means for receiving a billing approve/reject signal from a server system to the client system;

means for conducting two-way communications between an electronic communications network and the client system via the server system if an approve signal is received.

31. A data storage medium including machine readable thereon for use in a server computer system having means for reading code from the storage medium, the server system being adapted for communication with a plurality of client systems, the storage medium comprising:

means for providing a set of billing options, the billing options including at least one technique for making a monetary payment;

means for receiving a billing preference from one of the client systems;

means for transmitting a billing approve/reject signal from the server system to one of the client systems;

means for accommodating two-way communications between an electronic communications network and any of the plurality of client systems via the server system if an approve signal received in the client system.

32. A computer operating system having a communications feature for providing communication among a client system, server system and an electronic communication network, the client system running client software for managing the communications between the client system and the electronic communications network, the server system running server software for managing communications between a plurality of client systems and the electronic communications network, the communications feature comprising:

means for receiving a set of billing options from said server system, the billing options including at least one technique for making a monetary payment;

means for specifying a billing preferences and transmitting the billing preference to the server system from the client system;

means for receiving a billing approve/reject signal from the server system to the client system;

means for conducting two-way communications between the electronic communications network and the client system via the server system if an approve signal is received from the server system. signal step.

33. A method of providing communication among a client system, server system and an electronic communication network, the client system running client software for managing the communications between the client system and the electronic communications network, the server system running server software for managing communications between a plurality of client systems and the electronic communications network, the method comprising:

providing network setting parameters by the server system to a client system;

specifying a billing preference and transmitting the billing preference to the server system from the client system;

transmitting a billing approve/reject signal from the server system to the client system;

conducting two-way communications between the electronic communications network and the client system via the server system if an approve signal is provided in the transmitting a billing approve/reject signal step.

34. A method as set out in claim 33 further comprising the steps of:

recording network settings of the client system prior to the step of providing network setting parameters; and

restoring the recorded network settings following the step of conducting two-way communications between the electronic communications network and the client system.

35. An apparatus for providing communication over an electronic communications network comprising:

a server system having a processor unit and running server software controlling the operations of the server system;

at least one client system including a central processor unit (CPU), and a communications interface;

a plurality of access ports linked for electronic communication with the server system, wherein each of the access ports also is configured to be linked for electronic communication with a client system;

wherein the server software includes: means for providing a unique identifier to each of said client systems linked to a particular access port; means for receiving the unique identifier from any of said client systems and thereby identify the particular client system; and means for associating billing parameters with at least one of the client systems.

36. An apparatus as set forth in claim 35 wherein the server software further includes: means for promoting a communications between any of the client systems and an electronic communications network.

37. An apparatus as set forth in claim 35 further compromising a network management server in communication with the server system.

38. An apparatus as set forth in claim 35 further comprising a plurality of said server systems, each of which are capable transmitting and receiving data from the network management server.